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ABSTRACT

This booklet provides a brief description of secondary education in Switzerland. The publication is part of a series that seeks to make the public aware of the education systems and traditions in all signatory states to the European Cultural Convention and to outline the essential problems these systems presently are facing. This short booklet contains five sections. Part 1, "The Political and Social Context," contains: (1) "The Swiss Education System"; (2) "Historical Background"; (3) "Legal and Political Powers"; (4) "Structure of Secondary Education"; and (5) "Changes in Secondary School Teaching since 1968." Part 2, "Different Aspects of Swiss Education," includes: (1) "Elaboration of Educational Policies and Innovation"; (2) "Funding and Budgets"; (3) "School and Society"; (4) "Organisation of Secondary Education"; (5) "Schools as Communities"; (6) "Curricula"; (7) "Assessment"; (8) "School Staff"; and (9) "The European Dimension." Part 3 focuses on the "Efficiency and Performance in Upper Secondary Schools." Part 4 examines "Challenges, Problems, and Prospects." Part 5 contains a 6-item bibliography. (EH)

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Collection
Education

Secondary education in Switzerland

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Secondary education in Switzerland

by Roger Sauthier

Guide to secondary education in Europe
Editor Denis Kallen

A secondary education for Europe
Council for Cultural Co-operation

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The **Council of Europe** was founded in 1949 to achieve greater unity between European parliamentary democracies. It is the oldest of the European political institutions and has thirty-four member states,[1] including the fifteen members of the European Union. It is the widest intergovernmental and interparliamentary grouping in Europe, and has its headquarters in the French city of Strasbourg.

Only questions related to national defence are excluded from the Council of Europe's work, and the Organisation has activities in the following areas: democracy, human rights and fundamental freedoms; media and communication; social and economic affairs; education, culture, heritage and sport; youth, health, environment and regional planning; local democracy; and legal co-operation.

The **European Cultural Convention** was opened for signature in 1954. This international treaty is open to European countries that are not members of the Council of Europe, and it enables them to take part in the Organisation's programmes on education, culture, sport and youth. So far, forty-three states have acceded to the European Cultural Convention; the Council of Europe's full member states plus Albania, Belarus, Bosnia-Herzegovina, Croatia, the Holy See, Moldova, Monaco, Russia and Ukraine.

The **Council for Cultural Co-operation** (the CDCC) is responsible for the Council of Europe's work on education and culture. Four specialised committees – the Education Committee, the Standing Conference on University Problems, the Culture Committee and the Cultural Heritage Committee – help the CDCC to carry out its tasks under the European Cultural Convention. There is also a close working relationship between the CDCC and the regular conferences of specialised European ministers responsible for education, culture and cultural heritage.

The CDCC's programmes are an integral part of the Council of Europe's work, and, like the programmes in other sectors, they contribute to the Organisation's three overarching policy objectives for the 1990s:

- the protection, reinforcement and promotion of human rights and fundamental freedoms and pluralist democracy;

- the promotion of an awareness of European identity;

1. Andorra, Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, San Marino, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom

– the search for common responses to the great challenges facing European society.

The CDCC's education programme covers school, higher and adult education, as well as educational research. At present, its main priorities are projects on: the European dimension of secondary education; university co-operation; adult education and social change; modern languages, and the pooling of the results of educational research.

In 1991, the Council for Cultural Co-operation of the Council of Europe launched a project entitled "A secondary education for Europe". The aims of the project are to:

– give young people the knowledge, skills and attitudes they will need to meet the major challenges of European society;

– prepare young people for higher education, and for mobility, work and daily life in a multilingual and multicultural, democratic Europe;

– make young people aware of their common cultural heritage and their shared responsibilities as Europeans.

This project has two elements: the first devoted to reflections and consultations among the member states on the overall policies and strategies, and the second on the European dimension in the school curriculum.

The series entitled "Guide to secondary education in Europe" sets out to present in a synthetic form – country by country – the major elements of secondary education structures and policies that exist in CDCC member states.

Each guide has been written, on the basis of a common analysis, by experts designated by the authorities in each country concerned.

Denis Kallen has undertaken the difficult task of the general co-ordination of this series, guaranteeing its coherence and thus allowing comparisons to be made among countries.

Given that this is a field in which developments sometimes take place very quickly and are of an almost permanent nature, it is possible that, despite the considerable efforts made to take into account the latest reforms in the pipeline, certain changes may have taken place since the manuscript was originally received.

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I. The political and social context

1. The Swiss education system

The Swiss cultural and political context has produced decentralised, pragmatic policies. Education has been inspired by this approach as twenty-six different systems co-exist in the country. Differences are often considerable, although they are all rooted in the same traditions. Thus, one should refer to the education system in Switzerland rather than the Swiss education system.

Although important areas come under federal law, most sectors are regulated by the cantons, which are responsible for education.

In 1991, OECD experts saw Swiss education as a mosaic where each piece is more or less autonomous.[1]

2. Historical background

Up to the French Revolution, education underwent the same changes as in the rest of central Europe; the Enlightenment and the French Revolution stimulated the development of primary education. Then came Jean-Jacques Rousseau (1712-78) and his new vision of education, followed by Johann Heinrich Pestalozzi (1746-1827) and Grégoire Girard (1765-1850) who had a decisive influence on the development of public education.

In the nineteenth century, the introduction of compulsory schooling followed closely on the heels of democratisation of the state, industrialisation and development of trade. Schools were freed from Church control. The cantons drew up legislation covering compulsory schooling and founded secondary schools and gymnasiums (grammar schools). Educational structures were established at this time that are still in use. In the twentieth century, the school system was progressively improved. Particular emphasis was also placed on vocational training, often separated from the traditional school system and controlled by the confederation since 1930 (first law on voca-

1. *Reviews of National Policies for Education. Switzerland*. OECD, Paris 1991.

9

tional training). Lastly, courses in natural science and technology were introduced, or restructured if they already existed, at all levels of education. A new scientific discipline, educational economics, was added after the second world war, when it was realised that new blood was required for both economic and political reasons.

This was achieved by new educational developments and reforms at all levels, and cantonal laws on educational grants were passed. This new awareness and these changes required better national educational co-ordination. Different measures were taken by both the cantons and the confederation: strengthening the powers of the Swiss Conference of Cantonal Public Education Directors in 1968 (*Conférence suisse des directeurs cantonaux de l'instruction publique – CDIP*), the Concordat on Schools Co-ordination (1970), and the federal law on the allocation of subsidies for cantonal expenditure on education grants (1965). However, in 1973, the cantons rejected an amendment of the constitutional article on education that would have granted greater powers to the confederation.

3. Legal and political powers

Article 3 of the Constitution states that "the cantons ... exercise all the rights which are not delegated to the federal authority". However, the Constitution only assigns to the confederation a few specified duties. In upper secondary education these are the following:

- vocational training in industry, trades, commerce, agriculture and home economics;

- access to faculties of medicine and the Swiss Federal Institutes of Technology, with thus considerable effects on school-leaving certificates (*maturités*) and curricula in upper secondary schools (gymnasiums);

- gymnastics and sports;

- training and integration of handicapped teenagers;

- Swiss schools abroad.

The cantons are responsible for most of the organisation in schools. The allocation of responsibilities in secondary education is shown in the following table.

Responsibilities	Lower secondary education	Higher secondary education school-leaving certificate schools, diploma schools (*écoles degré diplome*)	Higher secondary education vocational training
Legislation	canton (confederation)	canton (confederation)	confederation (canton)
Implementation	canton (confederation)	canton	canton trade association
Responsible bodies (canton)	commune (canton)	canton commune private	canton commune trade association/ private

It should again be specified that neither confederation nor cantons have a single administrative apparatus covering the whole school system. In some cantons, vocational training is run by the heads of the public economics department, special education is run by the directors of public health or social affairs, farming education is generally run by agricultural directors and paramedical training is run by health department directors.

The same applies at federal level where responsibilities come under the Ministry of the Interior (universities, research, school-leaving certificates, grants, sport) and the Public Economics Department (vocational training, agricultural training).

Generally speaking, it can be seen that educational decisions are taken at each level by a large number of different bodies. Allocation of responsibilities is, primarily, historically determined and is not always internally logical. Overall the system would appear to lack transparency and flexibility.

However, this division of labour does have considerable advantages. The cantons consider their sovereignty in education as a basic part of their political and cultural identity, which is of fundamental importance in a multilingual, multicultural country. It also enables cantons to organise and plan their educational systems according to their own standards. While the levels attained are not always the same everywhere, although always of a high standard, schools can thus reflect local culture. Administrative decentralisation also has its advantages: it allows general education and, to an even greater extent, vocational training to take account of the social and economic environment. This means that education is both in direct contact with problems and relatively flexible, which compensates for the lack of centralised authority.

A complete overhaul of responsibilities is, accordingly, not required, and most problems that arise can be solved within the existing system, such as:

– horizontal (mainly intercantonal) and vertical (cantons-confederation; intracantonal) co-ordination;

– gaps: the fact that responsibility for some areas comes neither under the confederation nor the cantons (for example, the confederation is not responsible for vocational training; continuous training);

– international collaboration by Switzerland.

The cantons generally have authority to decide whether their schools should be run by the public or private sector, although the Constitution stipulates that primary schools should be run by the public sector.

Upper secondary schools offer a general education (gymnasiums, diploma schools, teacher-training colleges) and are generally subsidised by the cantons or communes.

The cantons, however, recognise private schools, which were mostly denominational in the past, and even subsidise them. In recent years, several gymnasiums that used to be run by the Church have been taken over by the cantons. The same trend has occurred in gymnasiums run by the communes.

Most upper secondary vocational schools are now also run by the cantons, although they receive financial assistance from various other sources: private companies, charities and public interest organisations or, again, the cantons. In compliance with the Federal Law on Vocational Training, students having studied in private schools may register for official examinations. Here again, trade associations have a major role to play.

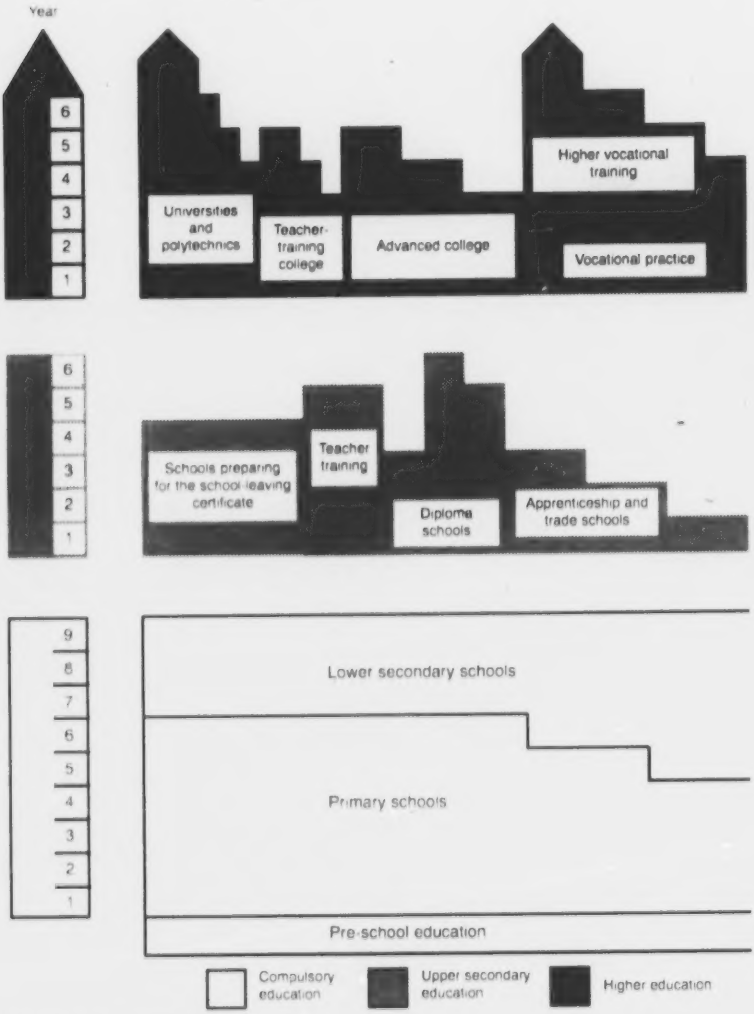
General and vocational continuous training depends to a great extent on the private sector – industry (which carries out its own training), trade associations and profit-making institutions, which also frequently receive confederation and canton subsidies.

Proposals aimed at privatising education and providing vouchers giving free access to all types of training have not made any headway.

Private schools have not developed very greatly except in the sector preparing for the school-leaving certificate exams and diploma of commerce. Private education is more widespread in the French-speaking part of the country and is generally not subsidised. It is often seen as a solution for parents wanting greater supervision of their children so as to increase their chances of gaining good qualifications. At the end of their studies, students in the private sector take their exams to obtain a school-leaving certificate at special sessions organised by the federal authority.

4. Structure of secondary education

The following figure gives a simplified illustration of the organisation of education in Switzerland (as at 1988):



Source © Federal Statistics Office

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It should be noted that secondary education is split into two divisions:

- lower division; the last phase of nine years of compulsory education. Its structure is variable and continually changing. The following areas show considerable variation:
  - duration: from three to five years;
  - organisation: some schools have clearly separated streams while other schools have barely differentiated levels of teaching;
- upper division, for pupils aged 15 to 20, has the following sections:
  - vocational, known as apprenticeship;
  - gymnasiums; schools preparing for the school-leaving certificate;
  - general education;
  - teacher training for primary school teachers.

More than 90% of children who have completed their compulsory education receive, sometimes after an intermediate year, the equivalent of upper secondary education. It should be noted that children on vocational courses spend 20% to 30% of their time at school. Approximately 70% of children choose vocational training, 15% go to gymnasiums and 5% attend other general education schools or teacher training colleges.

The duration and organisation of these courses vary, generally lasting for two to four years. Nearly 40% of pupils attend full-time courses at school, while 60% go into apprenticeship (dual system) combining work experience with part-time theoretical instruction.

The percentage of children staying on in school (proportion of pupils in their age-group) has increased continuously: 78% for 16-year-olds and 45% for 19-year-olds in 1977, rising to 89,9% and 56%, respectively, fifteen years later.

Course selection is mainly based on the results achieved in the lower secondary division. It should be noted that pupils only exceptionally change from one type of course to another in the upper secondary division. The current lack of flexibility in the system has stimulated the search for solutions such as the establishment of restreaming classes.

Children, except those in gymnasiums, generally finish their initial education in upper secondary schools and then go into active life.

Gymnasiums are currently the only route to university-type higher education without any further requirements. Children choosing vocational education can only enter higher technical education after completing a further course in general education and passing an entrance examination.

Schools had to face an entirely new challenge in the mid-1960s: the massive influx of immigrant workers' children. They now account for 16% of upper secondary pupils.

5. Changes in secondary school teaching since 1968

The most significant developments in Swiss secondary education in the last twenty years are the following:

- continuous changes in the lower secondary division leading to the establishment of more flexible structures delaying stream selection;
- opening up of the gymnasium sector with:
  - recognition in 1968 of the equivalence of the type C school-leaving certificate (mathematics-natural science) and the traditional A and B types (classics);
  - recognition in 1972 of two new school-leaving certificate streams: type D (modern languages) and E (economic science). This has created the basis for the current division of gymnasiums into five different sectors;
- establishment of diploma schools in 1987, offering general education to a lower standard than school-leaving certificate courses, but designed to fill the gap in the range of training options;
- modest changes in the apprenticeship sector with the setting up of higher vocational schools in 1980;
- better facilities for the handicapped.

II. Different aspects of Swiss education

1. Elaboration of educational policies and innovation

Cantons are responsible for planning their secondary education systems and applying the relevant decisions. They have to comply with the general conditions imposed by the confederation, although they still enjoy considerable leeway. Collaboration between cantons in some types of schools is growing.

The running and administration of cantonal education is the responsibility of the cantonal government and its Public Education Department (Ministry of Education), shared with the Education Council in several cantons. This council is in fact a collegiate authority whose members, generally elected by the cantonal parliament, run internal educational organisation (curricular planning, teaching facilities, school discipline).

Vocational education in several cantons is run by the Public Economics Department, Agriculture Department or other *ad hoc* bodies rather than by the Public Education Department. This situation raises considerable problems in applying a coherent cantonal education policy.

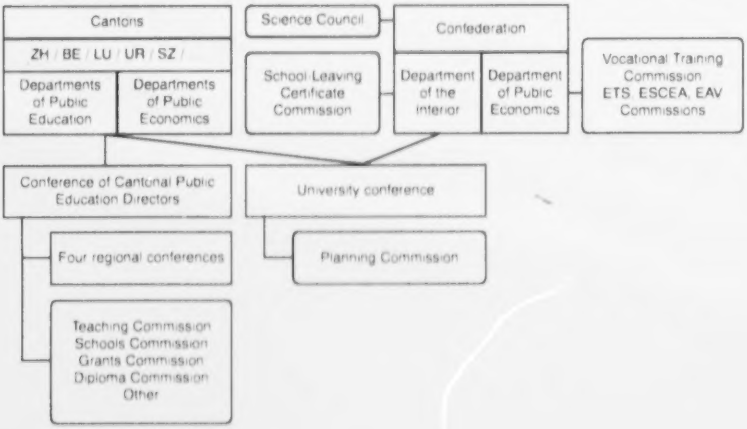
The extent of education administration depends on the size of the canton. However, education services were set up in the 1960s to monitor standards in compulsory education and to contribute their scientific skills to research in the field.

Such services did not develop greatly for upper secondary education. The teaching profession has the legal and practical right of intervention in all cantons. This covers consultation rights plus, frequently, participation rights. This principle gives teachers direct control in practical matters and can either stimulate or hinder the introduction of innovations.

Parents' intervention rights are by contrast less institutionalised. In cantons and communes, for example, the system of direct democracy enables all citizens to decide what system of compulsory education they want, thereby diminishing the influence of parents who are the people actually concerned.

The need for mutual information and exchanges, of experience led the heads of public education to set up the Swiss Conference of Cantonal Public Education Directors in 1897. The work undertaken stimulated collaboration between cantons and co-ordination between schools. It also facilitated the mobility of people between cantons and produced a scientific approach to all matters affecting educational policy.

The following table shows the institutions concerned with educational policy:



In compliance with its legal responsibilities in the field of education, the confederation organises vocational training and science and research policy. It also intervenes in the gymnasium system through recognition of the school-leaving certificates, and in cantonal grant allocation policy through federal subsidies. Recently, the confederation has also attempted to promote certain fields (information science, continuous education) by launching an offensive to encourage proficiency training. Vocational training has been closely linked to federal economic and employment policy since being run by the confederation. This has meant that responsibilities come under the Department of Public Economics and two of its offices: The Federal Industry, Trades and Employment Office (for vocational training in commerce, industry and domestic economics) and the Federal Agriculture Office (for agricultural schools). Basic vocational training is a dual system where trade associations make a significant contribution.

The confederation generally exerts its management and control functions discreetly, and its administrative structures are relatively modest in size. It car-

ries out its duties through the Swiss Educational Training Institute whose main concern is teacher training for vocational schools. It also acts as a research and reference centre.

An important text for co-ordinating the school system was drawn up in 1970. This is the School Co-ordination Agreement, which was established by the cantons "to develop school systems and harmonise their respective cantonal legislation" (Article 1).

The cantons signing the agreement are committed to co-ordinating their education legislation in the following way:

- compulsory age for starting school: 6 years of age by 30 June;

- duration of compulsory education: nine years, thirty-eight weeks of schooling per year;

- duration of education up to school-leaving certificate: at least twelve years and thirteen years at most;

- start of school year: mid-August to mid-October.

Application of these general provisions has raised serious problems as education law generally has to be approved by the electorate before being changed. The process of adaptation has taken over fifteen years, although the stumbling block was a relatively trivial aspect: the start of the school year. All four objectives of the agreement have now been attained.

Apart from this small number of binding measures, the agreement is above all a way of achieving voluntary collaboration and harmonisation. According to Article 3, this collaboration is found in both improvements and changes made to the school system (reforms) and in adaptation of structures and recognition of certificates and qualifications obtained by equivalent training courses. Article 4 also promotes co-operation between cantons in the field of education planning, educational research and statistics.

The agreement did not create specific structures to achieve these goals, but deliberately mandated the Swiss Conference of Cantonal Public Education Directors (CPED) to do so (Article 3). The CPED (and its component bodies) and the four regional conferences:

- French-speaking Switzerland and Ticino (BE, FR, TI, VS, VD, NE, GE and JU cantons);[1]

1. The twenty-six cantons: AG (Aargau), AI (Inner Appenzell), AR (Outer Appenzell), BE (Bern), BL (Basle), BS (Basle-city), FR (Fribourg), GE (Geneva), GL (Glaris), GR (Grisons), JU (Jura), LU (Lucerne), NE (Neuchâtel), NW (Niederwalden), OW (Oberwalden), SG (St-Gallen), SH (Schaffhausen), SO (Solothurn), SZ (Schwyz), TG (Thurgau), TI (Ticino), UR (Uri), VD (Vaud), VS (Valais), ZG (Zug), ZH (Zurich).

– north-west Switzerland (BE, LU, FR, SO, BS, BL and AG cantons)

– central Switzerland (LU, UR, SZ, OW, NW, ZG, and VS cantons);

– eastern Switzerland (ZH, GL, SH, AR, AI, SG, GR and TG cantons and Liechtenstein)

are empowered by the cantons to carry out the responsibilities defined by the agreement (Article 6).

This work undertaken by the CPED includes forecast studies and reform projects of national importance.

The following are the most important forecasts carried out since 1970:

– "Secondary teaching tomorrow" (1969-72);

– "Training tomorrow's teachers" (1970-74);

– "Diploma schools" (1975-87);

– "Training of lower secondary school teachers" (1979-82);

– "Training of upper secondary school teachers" (1984-89).

Recent work by the conference has mainly covered:

– the "Proficiency training of teachers" project: due to the paramount importance of teacher proficiency training, the CPED decided in 1988 to set up a project to analyse experience over the previous twenty years in the field, and to redefine the framework;

– the "Education in tomorrow's Switzerland" project. This forecast is designed to assess what teaching policies should be adopted and to propose different ways of implementing them.

Attempts to reform gymnasium education by reducing the number of subjects and concentrating the number of different types of school-leaving certificate have failed. Efforts have mainly been directed towards internal reforms. In 1992, standard curriculum frameworks for school-leaving certificate schools throughout the country were devised in collaboration with teachers. The document defines, independently of traditional curriculum guidelines, what basic knowledge, behaviour and skills are required to prepare for the school-leaving certificate. These principles are intended to serve as a guide to cantons and schools in devising their own teaching programmes and could in the long term eventually help harmonise gymnasium education in Switzerland.

The work has been carried out by working parties belonging to the CPED Education Commission. They are made up of teachers' representatives, research centres and all four regional conferences. The goal of this work is above all to achieve a consensus, but will not automatically result in formal recommendations by the CPED to the cantons. However, we have observed that cantons have generally used these studies and adopted their conclusions.

2. Funding and budgets

Public expenditure on education and research was 14 560 thousand million Swiss francs in 1989, that is 18,7% of total expenditure, against 3 756 thousand million Swiss francs (18,5%) in 1970. The mean annual growth rate was 9,5% from 1970 to 1980, and the growth rate for total expenditure was 8,8%. Between 1980 and 1985, the former fell to 5,6% and thus became lower than the latter (5,9%).

Public expenditure is divided into three equal shares between the confederation, cantons and communes. This principle does not, however, apply to education, owing to the responsibilities assigned at each level.

Compulsory education and upper secondary education are almost exclusively funded by cantons and communes. The same applies to vocational training where the confederation's share is only 20%. Private companies contribute to the funding of the dual training schemes.

Funding is hence mainly provided by local and regional administrations, with central government only accounting for a small share. During the last thirty years, education spending has accounted for 15% to 20% of total state expenditure and for 2,5% to 5,1% of the gross domestic product.

It is impossible to determine the exact amount devoted to upper secondary education. It is, however, estimated that vocational training accounts for 14,5% of spending and that other upper division secondary schools account for 12,5%.

Public expenditure on vocational training can be broken down as follows:

- communes: 17,7%;
- cantons: 64,5%;
- confederation: 17,8%.

The rest of the upper secondary division can be broken down as follows:

- communes: 4,1%;
- cantons: 92,2%;
- confederation: 3,7%.

Private enterprise also contributes to dual vocational training schemes. It is difficult to give exact figures, but it is estimated that it may provide upwards of 50% of the cost of training apprentices.

Wages take up 65,9% of the total education budget, with teachers' salaries accounting for 53,8%.

3. School and society

As over 70% of children attending upper secondary education are in close contact with the world of work, vocational training schools have close links with industry.

Swiss apprenticeship is mid-way between training and production. In an apprenticeship contract, "the apprentice instructor undertakes to train the apprentice in a given trade in compliance with the rules of the trade, and the apprentice undertakes to work for the instructor to acquire this training" (Code of Obligations, Article 344).

As apprentices can often do their apprenticeship close to home, they are governed by the law of supply and demand, which gives a good chance of finding a job once they have completed their training. Their integration into the world of industry still, however, carries some risks, particularly that the apprentice will be given too much work instead of training.

Children generally receive their upper secondary education as close to home as possible. This explains why schools are regionally located, where they also have a cultural, social and sports function.

Regular relations are maintained between schools and public health institutions. However, these relations vary in accordance with the projects implemented.

Parents' associations have not been officially established everywhere, although they have become increasingly common.

4. Organisation of secondary education

Lower secondary education

The length and organisation of lower secondary education varies according to the canton. The same applies to whether the system is "separate" or "co-operative". Most schools are of the co-operative type from the age of 12 (six years primary schooling for everyone, three years of lower secondary education, organised into a small number of streams – two – with restreaming classes, different course levels for core subjects and optional courses for everyone).

It is in the organisation of lower secondary education that the variety in cantonal school systems is most striking:

Type of lower secondary education	5 years	4 years	3 years
Separate schooling			
2 courses	BE,JU,VD		SG,TG
3 courses	BS[1]	AG,BL,NE	AR,AI,GR,GL
4 courses			SO,ZH
Co-operative schooling			
2 courses		TI	VS, SH,
3 courses			FR,LU,UR,SZ, OW,NW,ZG,GE
Number of cantons	4	4	18

Lower secondary education lasts three, four or five years and has two to four different sections, depending on the canton. Different experiments in comprehensive schools have not survived the experimental phase with the exception of the pre-specialisation classes in the Canton of Geneva. Some cantons have, however, managed to develop some characteristics of comprehensive schools such as improving permeability (changing from one stream to another) and individualisation of teaching by reducing the number of streams and introducing optional subjects and courses given at different levels or joint teaching of certain subjects to pupils from different streams.

1 See page 19 for list of cantons

Elementary streams (known according to the cantons as practical, modern or pre-vocational; in German-speaking Switzerland: *Realschule*) prepare for straightforward vocational training.

Streams with broader requirements (general, science, classics) prepare for more advanced training and school-leaving certificate schools. In some cantons, the lower division in school-leaving certificate schools is integrated into lower secondary education as a distinct stream.

The concept of a unified system of compulsory education faces difficulties in the Swiss school systems. Lower secondary education prepares some of its pupils for long studies, but most children (around 70%) go into specialised vocational apprenticeships at the end of their secondary education.

As a consequence the school organisation offered varies in the choice of subjects, pace of learning, timetable allocation and approach. Hence, lower secondary education poses the problem of triple transition:

- continuity regarding primary education;

- downstream with guidance/selection towards a dual system of apprenticeship/academic studies;

- within the system with the movement of children between the different streams.

Lower secondary education teachers claim they have to cope with a series of conflicting objectives. On the one hand, they have to teach core subjects, cultural heritage, science and democratic values, while, on the other hand, they have to prepare children for academic and/or vocational training streams. Teachers also have to adapt to primary school reforms and respond to the demands of the workplace; to the new ambivalent ideology that combines new ideas (information technology) with conservatism (the value of basic skills and traditions).

Lower secondary schooling is in the process of finding its way by changing from a traditional, selective system to the creation of more comprehensive teaching. Although each canton has its own distinct education plans, all cantons have developed and adopted similar general guidelines, representing a sort of lower common denominator, over the last twenty-five years.

Upper secondary education

Vocational training: the dual system

Vocational training in Switzerland maintains strong links with the workplace. It is mainly supported by the private sector of the economy and industry. Apprenticeship instructors take on the responsibility for young people, who have completed their compulsory education, up to the age of majority. This goes beyond the simple transmission of professional skills.

This training system, whose principles go back to the traditional trade corporations, has proved to be sufficiently flexible to survive the structural transformations in the economy and to adapt to large industrial corporations and to the service sector. It is true that it has gradually been realised that practical training also requires theoretical instruction and general education courses, which companies alone are unable to give. The dual system of training has gradually evolved over more than a century. Practical training is acquired in a company under the supervision of an apprenticeship instructor and the basic theory required for the trade is taught at a vocational college alongside general education, gymnastics and sport. Vocational training takes up one to one-and-a-half days per week, and there may also be additional optional courses taking up a total of two days a week.

Apprenticeship lasts two, three or four years depending on the profession. Once compulsory education has been completed, young people can choose from some 270 professions in industry, trades, commerce, banking, insurance, transport, hotels and catering, the rest of the service sector and home economics. Before starting the training, the apprentice or their legal representative and the apprenticeship instructor sign an apprenticeship contract, whose terms must be approved by the cantonal authority responsible for vocational training.

The Federal Department of Public Economics drafts the regulations on apprenticeship and the final corresponding examinations. The Federal Office of Industry, Industrial Arts and Crafts and Employment draws up a vocational training programme defining teaching syllabuses at vocational colleges.

The development of technology also affects the number and content of training courses. Some professions are in the process of disappearing while others are emerging: change is, however, slow and the number of professions is despite everything very stable. At the final apprenticeship exam, apprentices have to demonstrate that they have acquired the knowledge and skills necessary for their profession. If they pass the exam, they receive the Federal Proficiency Certificate. In 1987, the pass rate was 94% for girls (24 303

passes out of 25 873 candidates) and 92% for boys (35 338 passes out of 38 454 candidates).

According to a study carried out in the Canton of Zurich, approximately 85% of apprentices passed the exam at the end of their apprenticeship. Approximately half of those who failed changed to another apprenticeship, which they completed successfully.

Unlike other sectors of education, the cantons only have limited responsibilities in the field of vocational training. The confederation lays down detailed standards for the sector, grants federal subsidies and supervises compliance with the law. The cantons, however, still play an important role as they exercise all those responsibilities of public authorities not specifically assigned to the confederation in vocational training. These are mainly supervisory and organisational responsibilities for the exams at the end of the apprenticeship and vocational training. The cantons are responsible for applying federal law. This being the case, they have considerable leeway due to the federalist structure of the Swiss State. In turn, the cantons delegate certain tasks to the communes or other bodies. The cantons carry out their responsibilities in many areas in close collaboration with each other. Cantonal vocational training offices, the executive bodies in this field, work together.

Most young people receiving basic vocational training under the Federal Law on Vocational Training do an apprenticeship in the workplace. The rest (20%) acquire their training either through an apprenticeship completed in a trade or applied arts school giving full-time practical and theoretical courses or through a school of commerce whose final exams are recognised by the confederation. Such schools are either state establishments or private institutions approved and licensed by the authorities.

Upper general secondary schools

- *School-leaving certificate schools (gymnasiums)*

These are the main upper secondary schools offering wide general education to the brightest children. They have a long tradition going back to the Middle Ages. The current standards and objectives in these schools are still based on nineteenth century humanist and scientific ideals, which have been partially brought up to date by the demands of modern society. However, the high degree of differentiation in the types of education combined with the aim of giving a general education leading to the *maturité* certificate (the school-leaving certificate required to enter university) thus giving direct access to different higher education establishments, and the profile of gymnasium teach-

ers, specialists in one subject rather than general teachers, show how much today's gymnasiums are still strongly rooted in Humboldt's concepts of the nineteenth century.

Gymnasiums in Switzerland are generally designed to be highly selective schools. They have very high standards and hold a monopoly on access to university, which they intend to keep. This is an important fact in education policy as, although all the cantons have gymnasiums, only eight have a university. Cantons without universities thus have a particular interest in maintaining national standards ensuring that their students gain access to higher education. Selection procedures vary considerably in practice. Most cantons and schools carry out selection before entering upper secondary education (end of compulsory education), while others still have very open access to upper secondary education but are then forced to select during pupils' careers in the gymnasium. In the former case, gymnasiums appear to be relatively elitist while in the latter, they act as upper secondary schools more concerned with giving general education than emphasising university entrance as their main priority.

A Federal Ordinance on the Recognition of School-Leaving Certificates (*maturité*) has greatly contributed to co-ordinating these different procedures. Although the confederation only uses this text to control access to medical schools and Swiss Federal Institutes of Technology, it has in practice acquired general acceptance due to the lack of any other rules on national school-leaving certificates. Five types of gymnasium education (streams) are recognised by this regulation in Switzerland:

- type A: classics (Latin, Greek);
- type B: modern languages and Latin;
- type C: mathematics and natural sciences;
- type D: modern languages;
- type E: economics.

Apart from the five types of school-leaving certificate recognised by the confederation, there are other types only recognised by cantons offering education of a high standard such as art and socioeducational certificates.

The structure and length of gymnasium education varies considerably according to the cantons, but there are always two basic types of education:

- traditional continuous education, lasting seven to eight years, in which the gymnasium includes compulsory education sections (three or four years);

– discontinuous education, lasting three or four years, in which preparation for the school-leaving certificate only starts once compulsory education has been completed.

Around 13,5% of Swiss children obtain their school-leaving certificate. The proportion of children attending gymnasiums varies considerably from one canton to another depending on different factors – university cantons: from 26% in Geneva to 8% in Bern; German-speaking Switzerland: 11,5%; French-speaking Switzerland: 19%; urban areas: 16%; and rural regions: 9%.

Two further observations can be made that apply throughout the country and to all regions: the first is the increase in the number of children passing their school-leaving certificate each year, which is partly due to greater democratisation of education – 6 440 in 1970 to 12 090 in 1990 – and the second is the constant increase in the proportion of girls obtaining the certificate: 30,6% in 1970 and 48,6% in 1990. It should also be noted that the number of girls varies enormously according to the type of school-leaving certificate, with a very high proportion in language streams, whereas boys greatly outnumber them in mathematics and natural science streams.

The state must also take account of the increasing demand for "the second education route", the school-leaving certificate for adults.

- *Diploma schools* (écoles de degré diplome)

Before and immediately after the second world war, certain cantons and communes created general education schools as part of the upper secondary division with lower standards than school-leaving certificate schools. These are known as diploma schools, tourism schools, management schools, etc., and most of their students find work in the health and education sectors (for example, in kindergartens). No single system exists for such schools in terms of structure, curriculum or even length of training (one to three years after compulsory education). They are mostly attended by girls with the exception of the management schools where boys make up most of the students. The success of these new types of schools, a sort of intermediate establishment between gymnasiums and vocational schools, proves that they fulfil a real, growing need. In its 1972 report, the Commission on Tomorrow's Secondary Education called for a detailed study on diploma schools, in order to take some of the strain off the gymnasiums and to extend the range of training options in upper secondary education. The idea was to promote the development of an independent type of equivalent school throughout Switzerland.

In 1987, after over fifteen years of debate, a consensus was reached by the cantons on Diploma Recognition Directives and Course Framework Planning in Diploma Schools. Secondary diploma schools have filled a gap in training options at upper secondary level. They are designed for a category of students whose numbers have continued to rise over the last fifteen to twenty years and respond to the following requirements:

– enabling a wider section of the population to complete their post-compulsory general education;

– familiarising students with all aspects of future employment (but not vocational training as such);

– meeting the needs of all children not able or not necessarily wanting to attend a gymnasium but still needing enough general education and culture to enter non-university higher vocational training (most children select educational, paramedical, social, administrative or art courses).

- *Teacher training colleges*

Most Swiss cantons carry out the training of pre-school teachers in upper secondary level teacher training colleges, some of which require the same general education standard as diploma schools or even gymnasiums for admission. Cantons offer two types of training for primary school teachers: teacher training colleges (upper secondary level) and university after secondary education in a gymnasium.

- *Admission requirements in upper secondary education*

Admission regulations and standards in upper secondary education vary considerably as each canton sets its own system. It is thus impossible to establish an inventory. The same applies to entry into higher education.

Integration of foreign children

Since the end of the 1960s, the authorities have attempted to devise policies to integrate foreign children whose parents are immigrant workers. The proportion of such children is around 20% nationally but varies enormously from one canton or commune to another. Integration is based on two basic concepts: the integration and respect of their native culture and the right to extended education in their native language and culture.

The CPED has taken up and extended these concepts dating from 1972. In 1985, it adopted formal recommendations with the following practical implications:

– direct admission of children into schools and streams corresponding to their level of education and age, while also organising special remedial and language classes for them free of charge;

– offering newly arrived upper secondary schoolchildren special courses to ease their access to employment;

– offering out-of-school support to children requiring it.

Examples of outstanding problems are: improving collaboration between teachers from the country of origin and host country, and improving the language skills of some foreign teachers.

The disproportionate number of foreign children in special education and the tendency of many foreign parents to take their children out of education at school-leaving age are major worries.

Special education

The creation of special homes for physically and mentally handicapped children dates back to the nineteenth century. Special rehabilitation teaching was developed for them, although the most seriously affected children were declared uneducable.

The notion of educative capacity disappeared from education legislation in the 1960s and was replaced by the unalienable right of any child, whatever their handicap, to schooling and care. The establishment in 1960 of Federal Invalidity Insurance, which contributes to the care and education of seriously handicapped children (invalids), has greatly strengthened the measures in favour of special education. The number of places available in special classes has risen from 3 000 in 1960 to approximately 17 000. Other educational and therapeutic services have developed alongside such as speech therapy, correction of dyslexia and dyscalculia, pyschomotor rehabilitation, etc. There are currently 1 400 full- or part-time speech therapists and around 2 600 specialised dyslexia teachers in Switzerland. Handicapped children are educated in either day schools or residential homes where emphasis is placed on social and occupational integration of the individual child.

In federalist Switzerland, each canton has established, since the creation of official schooling, its own educational and psychological support structures, which are very difficult to list exhaustively.

Vocational guidance

The choice of a profession at the end of compulsory schooling results from a relatively long process of maturation. Various measures are taken to assist this choice: careers information courses in the last year of compulsory education and a year for preparing career choice (one school year, guidance class, pre-apprenticeship). Pre-vocational courses are also organised by trade associations and companies, which are extremely important in helping teenagers choose their career. They generally last five working days and give young people detailed information about the various aspects of the profession. Career guidance helps children and adults to solve all the many problems involved in choosing their first profession and, later on, in pursuing their career.

Career guidance is regulated by the vocational training law. It is optional, free of charge and organised by the cantons. Career guidance services are designed to cater for people's individual abilities and choices, and offer the neutral, objective information required to make their personal decisions. Career guidance also communicates general information on professions and schools. Careers information centres are open to everyone without an appointment or a request for individual consultation being required.

5. Schools as communities

The sovereignty assigned to each canton for education is a basic feature of political and cultural identity, which makes it difficult to go beyond making generalisations about schools as social communities.

Each full-time school has its own theatre group and choir and even sometimes orchestra. Their public performances and concerts are eagerly awaited every year, and are frequently a valuable opportunity for contact between children, parents, teachers, politicians and the local community.

In social terms, many schools have set up structures in which young people have responsibilities as partners in the running of the institution. These pupils' associations have recently been organised into the Swiss Union of Pupils.

Increasing attention has been focused on designing a school environment to encourage studying and self-fulfilment. A very wide variety of solutions has been adopted owing to the differing urban and rural characteristics of the cantons.

Regular prevention and information campaigns are organised in collaboration with the Department of Health. Current themes are drugs and Aids. Violence is not prevalent in rural areas and is still under control in towns.

It should be specified that most young people attending upper secondary school spend over 60% of time on work-related activities. Young people are trained and supported by an employer who has considerable influence on their development and life experience. School for these young people plays a less important role in the transition to adulthood.

The school timetable in gymnasiums takes up more than thirty hours a week. It hardly leaves the pupil any time for paid employment. However, more and more children take up jobs during the summer holidays.

6. Curricula

Given the variety of instruction, it may be better to give a few concrete examples.

This example consists of the one-and-a-half days a week theoretical instruction given to electronic students in a technical college:

Subject	Year				Total number of lessons (45 minutes each)
	1	2	3	4	
Mathematics	80	80	-	-	160
Physics	40	40	40	-	120
Chemistry/materials science	40	40	40	-	120
Technical drawing	80	-	-	40	120
Electrotechnology/electronics	160	160	200	230	840
Computing	-	40	80	-	120
French	40	40	40	40	160
Commerce	40	40	40	40	160
Civics and economics	-	40	40	40	120
Gymnastics and sport	80	80	80	80	320
Total	560	560	560	560	2 240

Another example is gymnasium education. The following table shows the average number of lessons (sixty minutes) allocated to compulsory subjects during the three to four years leading to the school-leaving certificate.

Subject	Types of school-leaving certificate			
	B	C	D	E
Native language	425	436	430	442
First foreign language	359	359	439	393
Other language	793	334	784	335
Mathematics	413	585	407	422
Biology, chemistry, physics	483	659	498	482
Human sciences	582	495	495	1 096
Total	3 055	2 868	3 0[illegible]	3 170

The curricula in vocational sections are produced after collaboration between industry and the federal and cantonal authorities. Cantons are responsible for the curriculum in gymnasiums. This means that compulsory standard Swiss textbooks are non-existent. In this free market situation only a few textbooks written by teachers have acquired reference-work status. Apart from special vocationally orientated curricula, those for other subjects have not changed greatly but have gradually become overburdened.

7. Assessment

It is impossible to give a general picture of assessment in a system with twenty-six different ways of running schools.

Assessment of children's knowledge

Admission into upper secondary education is based either on the child's previous school record or on an exam. With a few exceptions, the conditions for gaining the final diploma (school-leaving certificate, federal proficiency certificate) are based on the results during the year and the final exams. Schools are delegated by the cantons to take charge of assessment.

A large number of 19-year-olds leave upper secondary education with qualifications. Their success in post-secondary education and in the workplace shows that the requirements of the different partners have been successfully matched. This could perhaps be a criterion for evaluating upper secondary education.

Assessment of institutions

Only special cases have been assessed at the request of local education authorities.

Only a few cantons have evaluated teachers, owing to the ambiguity of assessment and the great difficulty in judging objectively. Head teachers responsible for teacher assessment find this places a considerable extra burden on their workload.

School commissions and inspectors are in charge of supervision. Some cantons employ full-time inspectors who are professional teachers. The Cantons of Zurich and St-Gallen have lay inspectors (*Laieninspektorat*) appointed by school commissions from different business sectors. They are in charge of general school supervision.

8. School staff

The regions organise the basic training of lower secondary teachers. This may range from further training for primary teachers to university education.

Basic training for gymnasium teachers is given in the universities and Zurich Federal Institute of Technology. Non-university teacher training establishments in Basle, Geneva, Neuchâtel and the Vaud offer special courses and award qualifications recognised by other cantons.

Training for vocational school teachers differs from other teacher training as it is normally organised by the federal authorities. A specialised establishment in each linguistic region trains general education teachers (Swiss Institute of Education for Vocational Training). Teachers in vocational skills are generally recruited from the ranks of their profession and receive additional training.

Towards the end of the 1960s, training of upper secondary and specialised teachers was marked by:

- lack of detailed teacher training;
- almost complete lack of in-service training;
- almost complete absence of teaching qualifications recognition between cantons.

It should, however, be recognised that teacher training establishments have imposed high standards of teaching ethics, which they communicate to their students. As the teaching profession is a real avenue to social promotion, they have no problems of recruitment.

The weaknesses in the system came to light at the end of the 1950s. The general lack of teachers affecting nearly all levels and cantons from 1956 to

1974 delayed implementation of reforms. The situation deteriorated further when the cohorts of the baby boom entered education. Everyday problems in schools pushed educational reforms onto the sidelines.

In 1976, the Conference of Cantonal Public Education Directors published a report on the "Training of tomorrow's teachers":

– all levels of teacher training should include four independent, co-ordinated sequences: general education, special training for the level of teaching concerned, practical induction experience and refresher courses as part of in-service training;

– in principle, all types and levels of teacher training should come under the same system;

– teacher training should take account of social factors and the world of work.

This forward-planning study also took account of aspirations also being voiced in other countries: more thorough scientific training, a more professional approach by modernising and improving training, and relating theory more closely with practice. The keystone in the report was placing the role of teachers in a new context in which the educational freedom of learners would form on partnership and methodical stimulation, particularly through active teaching methods. New teacher training courses were designed to train teachers to put less stress on dispensing knowledge and controlling cognitive acquisition and working methods than on stimulating and counselling pupils at all levels. It seemed desirable to train teachers as facilitators assisting children to understand the whys and wherefores of problems, thereby equipping them to deal with different situations later in life.

The Conference of Cantonal Public Education Directors subsequently decided to continue its research in the field of teacher training by establishing a permanent *ad hoc* body, the working party on teacher training.

To summarise, the alliance between teacher training colleges and universities has improved the scientific and cultural standards of teachers. The joint agreement on goals by the authorities and national training bodies has raised the quality of training, which in turn guarantees equivalence.

Two gaps still, however, remain: devising and implementing a strategy for the general reform of all levels of teacher training in the cantons (this type of scheme has just been submitted in the Canton of Bern) or regions, and to develop the almost non-existent training of instructors.

Upper secondary school teachers are generally supposed to perform twenty to twenty-six hours teaching per week. They are, of course, obliged to devote enough time to supervise their pupils, encourage contact with parents and collaborate with their colleagues. Form teachers, heads of department and project co-ordinators may be exempted from such duties. Institutions sometimes employ outside staff for health services.

Teachers' annual salaries reflect Swiss variety, ranging from:

- start of career: 75 000 to 100 000 Swiss francs;
- mid career: 95 000 to 125 000 Swiss francs;
- end of career: 105 000 to 155 000 Swiss francs.

Teachers are in the higher bracket of public sector wages.

Appointed by the cantonal or communal authority, teachers generally enjoy a special status similar to that of civil servants with greater freedom and leeway.

The appointment and status of head teachers vary enormously from one canton to another. Most of them have had teaching experience and, therefore, know the system well and are able to manage the educational and operational aspects of their establishments, though their administrative tasks unfortunately prevent them from devoting their energies to teaching. They are often assisted by a deputy head, with set duties, who replaces them if necessary, and by senior staff with pedagogical responsibilities.

In-service training of teachers and head teachers is carried out by federal or regional further training centres. The Swiss Education Institute for Vocational Training has training centres for vocational instructors in Lausanne, Lugano and Bern. The Advanced Training Centre for Secondary School Teachers, whose headquarters are in Lucerne, is a cantonal institution designed to give further training to non-vocational secondary school teachers. Teachers can apply to their head for one of the wide range of courses available every year. Interest in such courses is growing and multidisciplinary topics are playing an increasing role. It should be noted that this period of advanced training is an opportunity for harmonisation and a pooling of experience in a country with such a wide variety of school systems.

9. The European dimension

Up to the present, schools have been left to take initiatives to promote the European dimension of education. Recently the Conference of Cantonal Public Education Directors and the Cantonal Public Economics Directors have adopted two important recommendations aimed at the relevant cantonal and federal bodies.

The first covers the following aspects of European education: values, history, cultural heritage, shared future, development of European awareness in young people, together with a more outward-looking and forward-looking attitude.

The second encourages domestic and foreign exchanges in the field of education (pupils, apprentices and teachers).

The aim is to promote exchanges to improve the learning of languages and mutual understanding between nations. Several organisations belonging to the Intermundo umbrella association for the promotion of exchanges for young people offer their services.

Switzerland, as a multilingual and multicultural country, promotes the teaching of French, German and Italian. In principle, any young person leaving compulsory education will have had at least three years of a second language. English of course also has an important place, particularly in gymnasiums and diploma schools.

III. Efficiency and performance in upper secondary schools

The table below gives details of the number of students registered and qualifications obtained in upper secondary schools

	1970	1975	1980	1985	1990
School-leaving certificate (*maturité*)	6 440	8 411	10 367	12 611	12 090
% of girls	30.6	36	42.5	44.3	48.6
% of 19-year-olds obtaining certificate	10.3	11	12.1	13.5	–
Level 10 vocational training	45 582	52 779	75 831	77 300	70 793
% of foreigners	–	–	11.5	13.4	17.2
% of girls	31.3	34.4	42.1	44.9	48
Exams at the end of apprenticeship	41 586	47 201	53 663	63 201	58 640
% of girls	30.2	32.7	37.5	38.8	43.9

The table shows:

– the trend in the number of young people gaining a school-leaving certificate after education in a gymnasium,

– the trend in the number of exams at the end of apprenticeship and the number of apprenticeship contracts concluded during the year in professions controlled by the Federal Office of Industry, Arts and Crafts, and Employment;

The three main observations are:

– a drop in the number of apprentices since 1985, due to the fall in the birth rate;

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– a slight, steady rise in the proportion of women taking an apprenticeship in one of the professions controlled by the federal office. This trend is likely to continue over the coming years;

– an increase in the rate of pupils passing the school-leaving certificate, though it is still much lower than in neighbouring countries. This characteristic of the Swiss gymnasium system is considered to be a criterion of quality worth keeping.

The trend in the number of apprentices is only partially explained by the fall in the birth rate. Although there were 105 000 16-year-olds in 1981, their number fell to 82 000 in 1989. This was partially offset by the growing proportion of women in vocational training and by the increasing number of young second generation foreigners taking apprenticeships (no figures available to confirm this).

Twenty per cent of young people completing their apprenticeship then go into higher vocational training, which is generally given in non-university higher vocational training schools. Some 55% of them are on day-release or "sandwich" training courses. Eighty per cent of pupils who obtained their school-leaving certificate in a gymnasium go on to university or an institute of technology; 66% of them (7,5% of their age-group) obtain a university degree. Post-secondary education has expanded considerably over the last twenty-five years, and the percentage of 22-year-olds in education has risen from 15% to 22%. Growth has been more sustained in the non-university sector and the share of women students, despite faster growth compared to their male counterparts, remains low having risen from 6% to 17%. The table below gives details of upper secondary level pupils in the school year 1991/92.

Type of education	Total	%	Girls	%	Foreigners	%
Schools preparing the *maturité*	55 968	19.4	27 323	48.8	7 805	13.9
Diploma schools	13 231	4.6	9 016	68.2	2 522	19.1
Teacher training colleges	8 803	3.1	6 979	79.3	244	2.8
Vocational training	207 410	72.0	86 270	41.6	34 313	16.5
Elementary training	2 517	0.9	996	39.6	823	32.7
Total	287 929	100.0	130 584	45.4	45 707	15.9

Elementary training is designed for young people not able to go into regular apprenticeship. It generally lasts for two years and is mostly practical.

IV. Challenges, problems and prospects

As elsewhere, debate has been going on for many years in Switzerland about its education system. However, it has accelerated over the last few years for domestic reasons related to the general economic situation, changes in the employment market and the continuously increasing demand by people for better general training for 16 to 20-year-olds. Two outside factors have also acted as catalysts: the OECD analysis of Swiss education policy[1] and the prospects of the integration of Switzerland into Europe.

The main point in the current debate and proposals for reform is to increasingly view upper secondary education as a coherent whole instead of treating it only in sectorial terms. A recently launched national research programme on the efficiency of Swiss training systems emphasises the overall educational goals of the upper secondary level in general education and vocational training alike. The programme specially underlines: "new qualification profiles are emerging in the workforce .... These new qualification profiles at all levels of industry not only require knowledge and technical skills. Emphasis is also increasingly being placed on more general accomplishments and capacities previously considered to be only required in the most senior posts: mental agility, flexibility in applying knowledge, ability to learn, capacity for abstract thought, independence, ability to take initiatives, decision-making, creativity, and ability to communicate and collaborate". (Group of experts chaired by Walo Hutmacher, Geneva).

Educational reform has never been spectacular in Switzerland owing to the federalist political system and considerable division of responsibilities. It is basically a long process involving participation by all partners, where wide consultation is required to adopt any proposals. However, reforms are implemented once decisions are taken.

1. *Reviews of National Policies for Education. Switzerland*. OECD. Paris, 1991.

Recognition of qualifications at the end of studies

An intercantonal agreement has recently been signed by cantons pertaining to the mutual recognition of final qualifications. This is an important step towards greater mobility in Switzerland and is also a necessary step towards future European integration.

Reform of the ORM (ordinance on the recognition of maturité *certificates) and adoption of standard curricula in school-leaving certificate schools*

The proposed reform, to be applied by framework regulations, is designed to reorientate the objectives of training (university access, general education, languages, culture, greater leeway, concentration on basics, reduction to twelve years of schooling, reduction in the types of school-leaving certificate, etc.). This reform, prepared by a joint confederation-cantons commission has currently reached the amendment phase following consultation. It has encountered some resistance from university lecturers and upper secondary teachers.

Alongside ORM reform, a standard curricula project has been devised, defining the educational and intellectual goals of gymnasiums from a global viewpoint, emphasising interdisciplinarity. It is based on four main subject areas: languages (first, second, classical), human science, experimental science and mathematics, art and physical education. The project has been produced in collaboration with nearly 250 teachers from throughout Switzerland and co-ordinated by a group of CDEP experts.

Development of higher training establishments

Specialist vocational training (technical, art, commercial, trades, agricultural, teaching) will be promoted in technical colleges with the status of advanced institutes of learning to meet the increasing demand for specialised staff and ensure recognition of qualifications. A vocational baccalaureate will be required as entry qualification, which can be obtained after at least three years apprenticeship followed by a one-year, full-time general education course. Young people will also be eligible if they have completed their general education and at least one year's practical experience in industry. The preparatory work will be undertaken by the confederation and the cantons and by *ad hoc* working groups.

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This publication contains a brief description of secondary education in Switzerland.
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The aim of this series is to make accessible to the public not only a systematic and coherent exposition of the educational systems and traditions in all signatory states to the European Cultural Convention, but also to outline the essential problems these systems are facing at the present time.
Each book has been written by an expert on the country concerned on the basis of a questionnaire. The questionnaire was drawn up by Denis Kallen who has both co-ordinated the series and undertaken the editing of each text in collaboration with the author.
Given that this is an area in which changes take place particularly quickly and that the translation, revision and publication of the manuscript require a certain amount of time, there will be an opportunity to publish updated information for the Final Conference of the project in 1996.

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